

LESSON TITLE: MANAGE SPACE

A. TRAINING OBJECTIVE

TASK: Know the procedures to manage space.

CONDITIONS: Given instruction in a classroom.

STANDARD: Correctly answer verbal questions when called upon.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS

1. Training time: Recommended instructional time is 0.5 hours.
2. Training location: Scheduled classroom.
3. Training type: Conference.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for each class of 20 students.
6. Training aids and equipment: Overhead projector, transparencies, and screen.
7. References: FM 21-305.

D. SEQUENCE OF ACTIVITY

1. INTRODUCTION.

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a. **Interest Device.** When a driver makes a mistake, other drivers need time to react. The only way you can be sure you have enough time to react is by leaving plenty of space between yourself and the vehicles around you. That space becomes a margin of safety.

b. **Tie-in.** You should try to keep a margin of space on all sides of you. Space margins provide time, distance, and visibility.

c. **Lesson Objective.**

ACTION: After this lesson the student will know how to keep a margin of safety ahead, to the side, behind, and between vehicles and problem drivers.

CONDITIONS: Given instruction in a classroom.

STANDARD: Correctly answer verbal questions when called upon.

d. **Procedures.**

(1) *Explanation.*

(2) *Summary.*

2. **EXPLANATION.***Transparency 4-77*

a. **Space Ahead.** Of all the space around your vehicle, it is the area ahead of the vehicle – the space you are driving into – that is most important.

(1) *Need for space ahead.* You need space ahead in case you must stop suddenly. Rear-end crashes are more common than any other kind. The reason for this is because a lot of drivers follow too closely, and when the vehicle ahead stops, they cannot stop in time.

(2) *How much space.* How much space should you keep in front of you? Two seconds is an absolute minimum at any speed. How can you tell if you are far enough back?

(a) To know how much space you have, wait until the vehicle ahead's rear bumper passes a shadow on the road, a pavement marking, or some other clear landmark.

(b) Then start counting the seconds it takes you to reach the same spot on the road.

(c) Count off the seconds like this: "one thousand-and-one, one thousand-and-two".

(d) If you pass the shadow, pavement marking, or landmark before you finish counting one thousand-and-two, you are following too close.

(3) *Extra space situations.* There are some situations where you should allow extra space. In these situations a three to four second following distance is needed:

- *Slippery roads.* If the vehicle ahead should slow or stop on a slippery road, you will need more distance to stop your vehicle.
- *Following motorcycles.* If a motorcycle you are following should fall, you will need extra distance to avoid the rider. The chances for a fall are greatest on wet or icy roads, metal surfaces such as bridge gratings or railroad tracks, and on gravel.
- *Passing driver.* When the driver behind you wants to pass, let him pass. Slow down, if necessary, to allow the passing driver to return to your lane.
- *Blocked rear view of driver ahead.* Be aware when following drivers whose view to the rear is blocked. Drivers of trucks, buses, vans, or cars pulling campers, boats, or trailers cannot see you very well. They could slow down suddenly without knowing you are behind them.
- *Heavy load or towing trailer.* When you have a heavy load or are pulling a trailer, the extra weight increases the time and distance needed to stop.
- *Following large vehicles.* When following large vehicles that block your view ahead, you need the extra room to see around the vehicle and to the sides.

(4) Buses and vehicles placarded for hazardous materials, to include tank trucks carrying flammable liquids, must stop at all railroad crossings. So expect the stops and slow down early to allow plenty of room.

(5) You should allow space when you are stopped on a hill. The vehicle ahead may roll back into your vehicle when it starts up or pulls out.

(6) When stopped in a line of cars at a traffic light, a stop sign, or traffic back-up, stop so that you can see the rear wheels of the vehicle ahead of you. This distance provides a safety margin if you are struck from behind.

(7) Drivers of large vehicles such as buses, cargo trucks, and tractor-trailer combinations require additional space ahead of their vehicles. As a general rule, you need at least one second for each 10 feet of vehicle length at speeds up to 40 MPH. At greater speeds, you must add one second for safety. For more detailed guidance on large vehicle following distances, see FM 21-305.

TRANSITION: Some vehicles are often wide and take up most of a lane leaving other vehicles with very little space in which to drive. Safe drivers will manage what little space they have by keeping their vehicle centered in their lane and avoiding driving alongside others.

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b. **Space to the Sides.** You need a margin of safety to the side of your vehicle to have room to react to sudden moves toward your lane by other vehicles.

(1) ***Driving alongside other vehicles.*** Avoid driving alongside other vehicles on multi-lane streets. Move ahead of the other vehicles or drop back. There are two dangers in traveling alongside other vehicles:

- Someone may crowd your lane or try to change lanes and pull into you.
- You may be trapped when you need to change lanes.

(2) ***Oncoming vehicles.*** Keep as much space as you can between yourself and oncoming vehicles. If you can, stay out of the lane next to the center line. That way, you will have more room to avoid an oncoming vehicle if it suddenly swerves toward you. This is very important at intersections where another driver could turn left without giving a signal.

(3) ***Vehicles entering freeways.*** Make room for vehicles entering freeways. If there is no one next to you, move over a lane.

(4) ***Freeway exits.*** At freeway exits do not drive alongside other vehicles. A driver on the freeway may pull off suddenly or a driver leaving may swerve back on.

(5) ***Parked vehicles.*** Keep a space between yourself and parked vehicles. Someone may step out of a vehicle or from between parked vehicles. A vehicle may suddenly pull out.

(6) ***Strong winds.*** Strong winds make it difficult to stay in your lane. The problem is usually worse for lighter vehicles. This problem can be especially bad coming out of tunnels. Avoid driving alongside others vehicles if possible, especially if the vehicle is larger than yours.

(7) ***Split the difference.*** Sometimes there will be dangers on both sides of the road. For example, there may be parked cars to the right and oncoming vehicles to the left. In this case, the best thing to do is split the difference and steer a middle course between the oncoming vehicle and the parked cars.

(8) ***Take dangers one at a time.*** Sometimes you are faced with two dangers at one time. Suppose there is an oncoming truck and a child on a bike to the right. Instead of driving between the truck and the child, pass them one at a time. Slow down and let the truck pass. Then, move to the left to allow plenty of room before you pass the child.

(9) **Compromise.** If one danger is greater than the other, give the most room to the worst danger. Suppose there is an oncoming truck, a line of cars to your left, and a child on a bike to the right. Since the child is more likely to make a sudden move into your path, give the child more room. This may mean moving closer to the truck and oncoming cars.

TRANSITION: The driver behind you has more control over the space behind you than you do. However, you can help the driver keep a safe distance.

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c. **Space Behind.** You cannot stop others from following you too close. But there are things you can do to make it safer.

(1) Keep a steady speed and signal in advance when you have to slow down.

(2) Stay to the right.

(3) You may at times find yourself being followed too closely or “tailgated” by another driver. To handle tailgaters:

- Open up room in front to help you avoid making sudden speed or direction changes. It also makes it easier for the tailgater to get around.
- If you are being tailgated and there is a right lane, move to the right.
- If there is no right lane, maintain a space margin ahead and wait until the way ahead is clear. Then, move to the right as far as you can and reduce speed slowly to encourage the tailgater to pass.
- Do not speed up, it is much safer to be tailgated at a low speed than a high speed. You could also end up tailgating the vehicle ahead of you.
- Avoid tricks, such as turning on your tail lights or flashing your brake lights.

TRANSITION: When you are in moving traffic, you can control the speed and position of your vehicle to keep a margin of safety around you. However, when you approach a line of traffic, you must share space with vehicles already there. One of the biggest problems drivers have is judging how much space they are going to need.

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d. **Sharing Space.** You must learn to judge how much space you need to:

- Merge with traffic.
- Cross or enter traffic.
- Pass other vehicles.

(1) ***Yield right-of-way.*** Remember, when you make any of these movements you must yield the right-of-way to the other vehicles. It is your job to allow enough space so that you do not conflict with the other vehicles.

(2) ***Space to merge.*** Any time you merge with other traffic, you need a gap of at least four seconds. Four seconds will give both you and the vehicle behind you a two-second following distance. You need a four second gap whenever you change lanes or enter a freeway from an entrance lane or merge with another road.

(a) Do not try to squeeze into a gap that is too small. Leave yourself enough space.

(b) If you have to cross several lanes, take them one at a time. Filter through traffic. If you stop to wait until all lanes are clear, you will tie up traffic and may cause a collision.

(3) ***Space to cross or enter.*** When you cross through traffic, you need enough room to get all the way across.

(a) Stopping halfway across is only safe when there is a median divider large enough to hold your vehicle.

(b) If you are crossing or turning, make sure there are no vehicles or people blocking the path ahead or the path to the side. You do not want to be caught in an intersection with traffic bearing down on you.

(c) Even if you have a green light, do not start across if there are vehicles blocking your way. If you are caught in an intersection when the light changes, you will block other traffic. In some cities you can get a ticket for this.

(d) Never assume another driver will share space with you. Do not turn into traffic just because an approaching car has a turn signal on. The driver may plan to turn just beyond you. Or, the signal may have been left on from an earlier turn. This is particularly true of motorcycles. Their signals do not cancel by themselves. Wait until the other driver actually starts to turn.

(4) ***Space to pass.*** Whenever you pass another car on a two-lane road, you must enter a lane that belongs to oncoming vehicles. At highway speeds of 50 to 55 MPH, assuming you accelerate to a speed 10 MPH faster than the vehicle you are passing, you will need about 12 seconds to

complete the pass. That means, you need at least a 12 second gap in oncoming traffic to pass safely. You will need 3 to 5 additional seconds to pass a larger vehicle, such as a tractor-trailer. You must judge whether or not you have enough room to pass whenever you approach: an oncoming vehicle, a hill or a curve, an intersection, and a roadway obstruction.

(a) *Oncoming vehicles.* At highway speeds you will travel about 1,000 feet in 12 seconds. So will an oncoming vehicle. That means you need over 2,000 feet or over one-third of a mile to pass safely. It is hard to judge the speed of oncoming vehicles over one-third of a mile away. They do not seem to be coming as fast as they really are. A car that is far enough away generally tends to be standing still. In fact, if you can really see it coming closer, it is probably too close for you to pass.

(b) *Hills and curves.* As already stated, you have to be able to see at least one-third of a mile if you are going to pass safely. Any time your view is blocked by a curve or a hill, you should assume that there is an oncoming vehicle just out of sight. Therefore, you should treat a curve or a hill as you do an oncoming vehicle. That means you should not start to pass if you are within one-third of a mile of a hill or curve.

(c) *Intersections.* It is dangerous to pass when someone is likely to enter or cross the road. Such places include crossroads, railroad crossings, and shopping center entrances. While you are passing, your view of people, cars, or a train is blocked by the vehicle you are passing. Also, a driver turning onto the roadway into the left lane will not expect to find you in his lane. He may not even look your way.

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(5) *Lane restrictions.* Before you pass, look ahead for road conditions and traffic that could cause other vehicles to move into your lane. You might lose your space for passing because of:

- People or bikers near the road.
- A narrow bridge.
- A patch of ice, broken pavement, or something on the road.

(6) *Space to return.* Do not pull out to pass unless you know you have enough space to return. Do not count on having enough time to pass several cars at once and upon other drivers making room for you.

- Before you return to the driving lane, be sure to leave enough room between yourself and the vehicle you have just passed.
- One way to do this is to look at the vehicle in the rearview mirror. When you can see the whole front of the vehicle you have just passed, you have enough room to return to the driving lane.

(7) **Roadway markings.** Many roads have lane markings that tell you when you cannot see far enough to pass.

- You may not pass when there is a solid line on your side of the road.
- You may pass if there is a broken line on your side of the road. Pass only if there are no oncoming vehicles in the passing lanes.
- The double yellow broken lines indicate reversible lanes. You cannot cross the lines except at certain times.
- Lane markings and signs can tell you when it is unsafe to pass. Only you can tell when it is safe to pass.

3. SUMMARY.

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- Recap Main Points.** Call on students to answer questions presented on Transparency 4-82.
- Allow for Questions.**
- Clarify Questions.**
- Give Closing Statement.** To be a safe driver, you need space all around your vehicle. When things go wrong, space gives you time to think and to take action. To have space available when something goes wrong, you need to manage space.

E. SAFETY RESTRICTIONS. None.

F. ADDITIONAL COMMENTS AND INFORMATION. None.